

CLAIMS:

1. Carbon black having:
a CTAB surface area from about 10 to 35 m²/g and
a DBP absorption from about 40 to 180 ml/100g,
wherein the ΔD_{50} value of the aggregate-size distribution is at least about 340 nm.
2. The carbon black of Claim 1 that has an M value of the aggregate-size distribution of 2 or more.
3. The carbon black of Claim 1 that has a standard deviation of the aggregate-size distribution of at least 300 nm.
4. The carbon black of Claim 1 that has a D75%/25% ratio of the aggregate-size distribution is 2.4 or more.
5. The carbon black of Claim 1 that has a $\Delta DBP/DBP$ ratio of 0.35 or more.
6. The carbon black of Claim 1 that has:
a $\frac{\Delta DBP \cdot 100}{DBP^2}$ ratio at least 0.29 (ml/100g)⁻¹.
7. A rubber or synthetic rubber mixture comprising the carbon black of Claim 1 and optionally precipitated silica, organosilane, and/or one or more rubber auxiliary(s).
8. The rubber or synthetic rubber mixture of Claim 7 that is a molded or extruded product.
9. An extrusion profile comprising the carbon black of Claim 1.
10. A profiled joint comprising the carbon black of Claim 1.
11. A product comprising the carbon black of Claim 1 selected from the group consisting of a pneumatic tire, tire tread, cable sheath, hose, drive belt, conveyor belt, roll cover, tire, shoe sole, gasket, profile and attenuator.
12. The rubber or synthetic rubber product of Claim 8 that is a tire, tread, or tire or tread component.
13. Clothing or footwear comprising the carbon black of Claim 1.
14. A construction, flooring or roofing product comprising the carbon black of Claim 1.
15. A plastic comprising the carbon black of Claim 1.
16. An electrical component, electrical conductor, battery, semiconductor, or electrical shielding comprising the carbon black of Claim 1.
17. A recording medium comprising the carbon black of Claim 1.

18. A pigment, tint, ink or paint comprising the carbon black of Claim 1.

19. A paper product comprising the carbon black of Claim 1.

20. A process for producing a rubber or synthetic rubber mixture comprising admixing a rubber or synthetic rubber and the carbon black of Claim 1.

21. A process for reinforcing a rubber or synthetic rubber product comprising adding the carbon black of Claim 1 to a rubber or synthetic rubber mixture forming said product.

22. The method of Claim 21, wherein said rubber product is an extrusion profile.

23. A process for producing carbon black having:

a CTAB surface area from about 10 to 35 m²/g and

a DBP absorption from about 40 to 180 ml/100g,

wherein the ΔD_{50} value of the aggregate-size distribution is at least about 340 nm comprising:

generating a stream of hot waste gas in the combustion zone of a furnace-black reactor having a combustion zone, a constriction, a reaction zone and a termination zone,

channeling the hot waste gas from the combustion zone through the constriction into the reaction zone,

mixing one or more liquid and one or more gaseous carbon-black raw material(s) into the stream of hot waste in the constriction for a time and under conditions effective for the formation of carbon black,

spraying water in the termination zone to stop the formation of carbon black and recovering the carbon black.

24. The process for producing the carbon black of Claim 23, wherein the carbon-black raw materials are injected into the constriction by means of one or more radial lance(s).

25. The process of Claim 23, wherein the gaseous carbon black raw material and the liquid carbon black raw material are introduced through separate lances.

26. The process of Claim 23, further comprising pelletizing and/or drying the recovered carbon black.

27. Carbon black produced by the process of Claim 23.